Clinicians do not agree any more than physiologists. Tripier, Ballet, Exner, Starr and others who have noted frequent co-existence of sensory perturbation with motor paralysis of cortical origin, are inclined to admit hypothesis of superposition of motor and sensory areas.

Inversely, other observers, having found sensibility intact in a large number of cases of hemiplegia dependent on lesions limited to Rolandic convolutions, do not accept theoretical deductions. What are the facts?

Ferrier cites 284 cases: Sensibility not mentioned, 100; sensibility intact, 121; sensibility altered, 63. Motor paralysis of cortical origin exists two out of three times with no sensory perturbation.

In twelve observations brachio-facial monoplegia we have found: Sensibility intact, four; sensibility altered, three; sensibility not mentioned, five.

In twenty-two cases brachio crural monoplegia: Sensibility not mentioned, thirteen; sensibility intact, seven; sensibility altered, two.

In twelve observations, crural monoplegia: Sensibility not mentioned, five; sensibility intact, five; sensibility slightly altered, one; diminished tactile sensibility, entire body with preserved pain and temperature sense, one.

Finally, eight observations, facial monoplegia: Sensibility not mentioned, four; sensibility intact, two; sensibility altered, two.

In one of the latter two cases anæsthesia extends beyond face to upper part right side of trunk; in the other case it was general.

Sensory phenomena not only are not superimposed upon motor, but they are transient. All who have studied them agree upon this. Shall we say they are capable of displacing themselves from one moment to another, of disappearing and reappearing from slight causes if they depend on the destruction of corresponding perceptive centres?

It remains to explain why alteration of motor zone in about one-third cases are accompanied with disturbances, cutaneous or muscular sensibility. Legroux and de Brun refer them to circulatory disturbances which are but beyond points in which paralytic lesion is located.

In our opinion the anæsthesias which sometimes accompanies the motor paralysis of cortical origin are mostly functional, analogous, if not identical, with hysterical anæsthesias—are superadded phenomena, accidental, not depending upon the lesion of the Rolandic region and playing no pathological part in the production of the paralytic symptoms.

III.

LIMITED ATROPHIES OF THE MOTOR ZONE CONSECUTIVE TO OLD AMPUTATIONS OF THE EXTREMITIES.

We know that long after the amputation of an extremity there results a more or less complete atrophy of the corresponding spinal cord segment.

Does atrophy occur in the brain tissue?

Dickson found no atrophy of the brain in four subjects where amputation had been performed, from two to fifty-three years before death.

Vulpian was not more successful.

Later observers reported changes, but many observations are valueless since the amputation followed congenital deformities and acquired atrophies of the limbs. To be of any value we must limit our study to cases in which cerebral atrophy, if it exists, can be traced to loss of limb.

Thirty-seven cases of old amputations are cited: Atrophy more or less marked in motor zone of opposite side in twenty-two cases; unchanged in fifteen cases.

Analyses of these cases does not make it clear why atrophy in some and none in others. The analysis seems to demonstrate that the cerebral atrophy is not the result of an ascending degeneration. The amputation of a limb is always followed by a unilateral atrophy of the cord segment corresponding to limb amputated. Above this region the gray substance and the white columns do not show alteration.

These atrophies are not constant enough nor sufficiently circumscribed to aid in the determination of functional topography of the cortical motor zone ELLIOTT.

On the Rule of the Facial Nerve in Secretion of Tears.—By E. Jendrassik. (*Revue Neurologique*, No. 7, 1894.) In two cases of facial paralysis Goldzieher observed that the eye of the affected side remained dry during weeping ; he therefore concluded that the lachrymal glands were supplied, not by the trifacial nerve, as is usually taught, but by the facial. Jendrassik, from observations on four cases of facial paralysis, inclines to Goldzieher's opinion. According to J., the lachrymal gland is supplied by the facial nerve as follows : Fibres are given off from the trunk of the facial nerve, as high up as the geniculate ganglion ; these fibres run along the great superficial petrosal nerve to the spheno-palatine ganglion ; from here one group of fibres is distributed to the soft palate, whilst another unites with the second branch of the trigeminus, another runs into the orbital nerve. The orbital nerve unites with the lachrymal nerve, and the combined nerves give off filaments to the lachrymal gland. MEIROWITZ.

ANATOMICAL.

The Employment of the Weigert-Pal Staining Method for the Central Nervous System Which Has Been Hardened in Formalin.—Magnus (*Neurolog. Centralb.*, Jan. 1, 1895).

Formalin has shown itself to be one of the best hardening agents for macroscopical purposes and nuclear stains. The drawback to it for general use has been, heretofore, that nervous tissue so hardened would not accept the Weigert stain. Dr. Magnus has overcome this difficulty, and has succeeded in staining specimens excellently by employing the following method : After the spinal cord has been in a one-half per cent. solution of formalin for from two to four weeks, small pieces one-half cm. thick are cut off and placed in a solution of Müller's fluid in a bread oven kept at 37 C. for a week. After this they are a day in 95 per cent. alcohol, and then for a day in absolute alcohol, and then follows the imbedding in celluloidin. After the piece has been cut on the microtome the sections are placed again in Müller's fluid, and then put in the bread oven for from a day to a week. The sections are then quickly washed in alcohol and put in the Weigert-Pal hæmatoxylin solution, where they soak for at least two days. The stain which he has thus obtained is very distinct. The myelin sheaths are beautifully blue, and all the degenerated tissue is decolorized. The ganglion cells are very distinct, and their nuclei show clearly. J. C.

PATHOLOGICAL.

A Case of Extensive Ependymal Glioma of the Cerebral Ventricles.—Pfeiffer. (*Deutsche Zeitschr. f. Nervenheilk.*, fifth volume, sixth part.) A thirty-two year-old cigar maker, who had always been healthy, began a year before to have twitchings of the head and eyes, these gradually increased in intensity, and were followed, after four months, by marked protrusion of the eyeballs. These were accompanied by psychical depression, slight degree of stupor, headache without definite localization and clonic convulsions in a part of the neck and face muscles. Later, right side Graefe's symptom, nystagmus, pupils equal, reactions normal, diminution of acuity of vision, opthalmoscopically, retinitis albuminurica. Tremor of the hand, but not inten-